

North American Drought Monitor – October 2004

Canada: By mid-August extremely dry conditions prevailed over most of the province. High water temperatures in some rivers also raised concern for fish habitat and returning salmon. Late summer and early fall rains and cooler conditions have since eliminated the risk of drought in all but the northeast corner of the province and part of the lower Skeena basin. Surface flows have returned to normal in most areas of the province. Recharging of depleted groundwater aquifers will take considerably more time and is dependent on adequate rainfall and winter snowpacks.

Many producers in Alberta wrapped up harvest for the 2004 crop season, although a mid month snowfall brought field operations to a standstill. Abnormally dry to severe drought conditions persisted in the High Level agricultural area in the northern Peace River Region of Alberta and across, northern Alberta, northern Saskatchewan and northern Manitoba.

Ontario farmers reported record corn yields on early seeded fields. Moisture levels fell in October and allowed the corn harvest to move rapidly. There were six Conservation Authorities in a confirmed low flow condition in southern Ontario: Ausable Bayfield, Catfish, Grand River, Hamilton Region, Long Point and St. Clair. Precipitation and streamflows in northern Ontario were above defined low flow criteria and generally in average range.

In Quebec, end of season weather conditions were ideal for ripening and harvesting the crops. Potato yields were average to near average. Corn yields varied from near to above average. The third cut hay yield was good and of good quality.

Although many parts of Atlantic Canada received below average growing season precipitation, agricultural production in general was not adversely affected. Rainfall throughout the growing season was timely and adequate for crop production and water supply needs.

United States: Two major Pacific storm systems contributed to record-setting snow and rain amounts during the second half of October, resulting in an outstanding start to the Western wet season. It was the wettest October for the Western region—California and Nevada—in over a century of record-keeping, and the Utah mountains saw their heaviest early snows on record, as several feet piled up in the Wasatch range. The final monthly tally showed over 200 percent of normal precipitation from the Great Basin southward through western Arizona and westward through California, with over 400 percent of normal across southern California into southern Nevada. October precipitation totaled over 1,000 percent of normal at several southern California locations, including the 6.17 inches in Burbank and the 5.34 inches at Long Beach. Up to 9.78 inches fell in Nevada on October 20, setting an all-time 24-hour record for the state. Several locations in Utah reported their wettest month on record, and Alta's 81 inches of snow beat the former October record by 11 inches. The abundant moisture resulted in removing D1 and D2

drought from western portions of southern California and upgrading D2 and D3 drought to D1 and D2 levels in large parts of Utah and Arizona, and smaller areas in Nevada. In addition, precipitation amounts ranging from 150 to 200 percent of normal improved the D2 in northwest Montana by one category. Above-normal precipitation also reduced the D2 area in western Nebraska and southern South Dakota and the D0/D1 areas in the Mississippi Valley and Great Lakes region. Heavy rains also reduced the D1 area on the eastern portion of the Big Island in Hawaii to D0.

Mexico: Wet conditions were observed across sections of northwestern and south-central Mexico. The Mexican National Meteorological Service reported an areal-averaged precipitation for the whole country of 16% above normal for October. The greatest concentration of wetness was observed over Baja Peninsula and the states of Sonora, Chihuahua, and Sinaloa, where the main rainy season associated with the Mexican monsoon area ends during September. Rainfalls in northwest Mexico were associated with synoptic events, particularly with Tropical Depression 16 that produced a maximum of 181 mm (7.13 inches) in 24 hours in northern Sinaloa. Some rains were also observed along the Pacific coast of Oaxaca and Chiapas, associated with the track of Tropical Storm Lester.

Rainfall in the northern tip of Baja resulted in the removal of moderate (D1) and severe (D2) categories, although an area of abnormally dry conditions (D0) still remained. A slight increase of D0 (abnormally dry) and D1 (moderate drought) were noted along the border between Sonora and Chihuahua. The distribution of drought along the Pacific and Gulf coast in southern and southeastern Mexico remained almost unchanged, but with a reduction in the intensity over Guerrero, Oaxaca, Chiapas, and Northern Veracruz. In contrast, moderate drought (D1) was introduced over Campeche, and it covered most of Quintana Roo.